EXHIBIT 14

modern Industrial Organization

Second Edition

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that du Pont lacked market power because, at the
r of cellophane had many substitutes, such as paper
the market including these substitutes was not large.
owever, that price substantially exceeded marginal
discussion, it was an error to include other wrapping
nition because they did not prevent the exercise of
the price of cellophane to competitive levels. If,
Pont had market power, the Court had investigated
ould raise the cellophane price, however, its market
ppropriate.

, the Supreme Court articulated a laundry list of
define markets.[14] It said: "The boundaries of such
ed by examining such practical indicia as industry or
market as a separate economic entity, the product's
ses, unique production facilities, distinct customers,
rice changes, and specialized vendors." The applica-
iteria has not led to precision in defining a market

sed to identify the good substitutes for a particular
producers in the industry who presumably know
ir potential competitors from other industries.
e in the same economic market, then their prices
ogether. Therefore, a reasonable *first* step in defin-
xamine the price correlations (a statistical measure
ogether) among different products that are under
the same product market.[16]
vels of correlation have been established to deter-
he same market, the available data may often be
rds. For example, suppose that everybody agrees
astic materials are in the same economic market.
ation between their prices and use it as a benchmark
ird plastic material belongs in the same economic
oducts.

ates, 370 U.S. 294 (1962).
g economic markets, have occasionally attempted to define
ned within an economic market. Presumably competition be-
nomic market is more intense if the two products also belong
on between *market* and *submarket* is not very useful, and we
o give an economic definition of the term *submarket.*
step in defining markets; however, high correlations need not
e in the same market. For example, dissimilar products made
rice correlations. Similarly, low correlations need not always
same market provided large quantity shifts accompany the
ne product rises, but the price of a good substitute does not,
oduct sharply declines.

The direct price elasticity—*not* the cross-elasticity of demand—determines market power. The **cross-elasticity of demand** is the percentage change in quantity demanded in response to a 1 percent change in another product's price. There is a lot of discussion in court decisions as to the importance of cross-elasticity of demand in defining markets. Courts often use the term loosely to indicate that products are substitutes. There is a relationship between cross-elasticity and direct elasticity, however. All else the same, the larger a cross-elasticity of demand, the larger in absolute value is the direct elasticity of demand.[17]

To intelligently discuss a cross-elasticity, one must specify whether it is the cross-elasticity of Product A with respect to the price of Product B or vice versa. Although these two different cross-elasticities are usually not distinguished in court decisions, they are not equal in general.[18] The relevant cross-elasticity of demand when the question is whether the market for Product A should include Product B is the cross-elasticity of demand for Product A with respect to the price of Product B.

The Extent of the Geographic Market. The geographic limit of a market is determined by answering the question of whether an increase in price in one location substantially affects the price in another. If so, then both locations are in the same market. The process of determining these limits proceeds along the same lines as discussed for the product market definition and involves similar reasoning. For example, consider the consumption of oranges in Chicago. Oranges are shipped to Chicago from outside the city limits. The geographic areas that ship to Chicago (or could profitably do so if price rose slightly) are in the same economic market as Chicago because they contain orange producers whose output significantly influences the price of oranges in Chicago. Notice that these same orange producers could also significantly affect the price of oranges in Milwaukee. Thus Milwaukee and Chicago would be in the same economic market, and the price of oranges in Chicago would generally be closely related to the price of oranges in Milwaukee.[19]

[17]This result follows because the sum of the direct elasticity plus all cross-elasticities of demand equals 0. Let the cross-elasticity of demand of Product A with respect to the price of Product B be $\varepsilon_{AB} \equiv \frac{\partial Q_A}{\partial p_B}\frac{p_B}{Q_A}$, where Q_A is the (income-compensated) demand for A, and p_B is the price of B. Then, $0 = \varepsilon_{AA} + \sum_B \varepsilon_{AB}$, where ε_{AA} is the own (direct) price elasticity of demand for product A (Henderson and Quandt 1980, 31–3). The cross-elasticity of demand is positive for substitutes, and the direct price elasticity is negative. The direct elasticity can be large even if no individual cross-elasticity is large.

[18]From demand theory, $\frac{\partial Q_A}{\partial p_B} = \frac{\partial Q_B}{\partial p_A}$. This last relationship does not imply that the cross-elasticities of demand (defined in the previous footnote) ε_{AB} and ε_{BA} are equal (Henderson and Quandt 1980, 30).

[19]See Landes and Posner (1981), Scheffman and Spiller (1987), and Stigler and Sherwin (1985) for further analysis of market definition.